WA3019 18A 9/15/02

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

Reply to
Attn of: WCM-126

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. RueAnn Thomas,
Environmental Programs Director
J.H. Baxter & Co.
85 North Baxter Road
Eugene, OR 97402

Re: **Approval with Modification,**
Partial Disapproval and Conditions of Approval
of the May 15, 2002, Revision 2, Site Investigation Work Plan
J.H. Baxter & Co., Arlington, Washington Facility
Administrative Order on Consent (Order)
Docket No.: RCRA-10-2001-0086
EPA ID No.: WAD 05382 3019

FILE COPY

Dear Ms. Thomas:

The United States Environmental Protection Agency (EPA) has completed its review of the above referenced revised work plan. By this letter EPA is hereby establishing the following actions pursuant to Section XII (EPA Approval of Plans and Other Submittals) of the Order: 1) approving the majority of the work plan with modifications specified in Enclosure A; 2) disapproving specific portions of the work plan specified in Enclosure B; and, 3) providing conditions for this approval in Enclosure C.

For the modifications provided in Enclosure A, Baxter must, pursuant to paragraph 75 of the Order, implement the work plan with EPA's modifications in accordance with the schedule contained therein upon receipt of this approval.

For the comments on the portions of the work plan that EPA is disapproving (Enclosure B), Baxter must, pursuant to paragraphs 75 and 74(a) of the Order, within thirty (30) days of receipt of this letter, correct the deficiencies in accordance with EPA's comments and resubmit those portions of the work plan. For the disapproved sections of the work plan, Baxter is subject to stipulated penalties for its failure to provide EPA with a work plan in which all portions are of

acceptable quality EPA. Paragraph 74 states that pursuant to Section XVIII (Stipulated and Statutory Penalties), stipulated penalties shall continue to accrue during the period of time that the Respondent is given to correct the deficiencies.

Regarding the conditions of approval provided in Enclosure C, no response from Baxter is necessary unless specifically requested within the comment. Please provide any requested response(s) within fifteen (15) days of receipt of this letter. Because the approval of this work plan is conditioned by these comments, failing to comply with these conditions may lead to EPA's revocation of this approval and the assessment of stipulated penalties for failing to comply with requirements of the Order (See paragraph 77 of the Order).

If you have any questions regarding this letter, please call me at (206) 553-0955.

Sincerely,

Kimberly A. Ogle
Project Manager

Enclosures

cc: Georgia Baxter, J.H. Baxter & Co., San Mateo, CA
Mary Larson, J.H. Baxter and Co., Arlington WA
Les Brewer, Premier Environmental, Portland, OR
Shawn R. T. Severn, Premier Environmental, Las Vegas, NV

INSERT CONCURRENCE BLOCK HERE

bcc: Jennifer MacDonald, ORC
Rene Fuentes, OEA
Christopher Pace, OEA
Julie Wroble, OEA

ENCLOSURE A

EPA MODIFICATIONS TO
May 15, 2002, Site Investigation Work Plan,
J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

Note: Modifications to the work plan provided by EPA below may also be applicable to other related sections of the work plan. Where this is the case but not expressly stated below, EPA hereby extends these modifications to related sections of the work plan.

1. Table of Contents, Page i: The Table of Contents is hereby modified to include Appendix A entitled, "Historical Site Data, Revision 2" and Appendix B entitled, "Sampling and Analysis Data Management Plan, Revision 2".

2. Section 2.3.4, Process Units and Air Emission Sources, Pages 2-5 through 2-7: This entire section is deleted from the work plan. EPA does not necessarily agree with the regulatory interpretations made by Baxter in this section and will not offer concurrence on this interpretation by approving this section.

3. Section 2.4.1, Catch Basins/Drains and Drainage Ditches, the last two sentences on Page 2-7: These two sentences are hereby modified to read, "As a result of surface topography, and roads at the Arlington facility, all precipitation, subsequent to the drainage modification made in 1991, 1993 and 1994, falling in the Main Treatment Area and Treated Pole Storage Area drained to facility ditches and catch basins in these areas. Likewise, after drainage modifications were made to the Untreated Pole Storage Area, precipitation falling in the Untreated Pole Storage Area drained to facility ditches and catch basins in the this area.

4. Section 2.4.2, Stormwater Discharge Permits, Page 2-8: The last sentence of this section is hereby modified to read, "The State Waste Discharge permit requirements include periodic water quality monitoring of selected storm catch basins and groundwater monitoring wells."

5. Section 2.5, Hazardous Waste Management, Page 2-9: The sentence in this section that reads, "Baxter recycles and reuses process residuals and wastewater in accordance with RCRA." is hereby deleted. EPA does not necessarily agree with this statement and, in addition, the sentence is inaccurate in that some "residuals" are also disposed of versus recycled or reused.

6. Section 4.4, Local Hydrogeology, Page 4-3: This section is hereby modified to include the following sentence at the end of the second paragraph: "However, valid groundwater data collected between 1988 and 1994 will be included in the Site Investigation Report, if appropriate." The rationale for this modification is that data are not precluded from use if

determined to be valid on the basis that they were collected "irregularly".

7. Section 5.6, Air, Page 5-11 and 5-12: This entire section is deleted from the work plan. EPA does not necessarily agree with the interpretations made by Baxter in this section and will not offer concurrence on this interpretation by approving this section. A revision for this section is required. For additional comments on this section see Enclosure B.

8. Figures 5-7 and 8-1: The highest concentration for PCP in stormwater is for catch basin CB 4. The proposed soil boring (SB-55) is approximately 200 ft. to the north. The work plan is hereby modified to located SB-55 100 feet closer to CB 4 to better characterize the previously detected high concentration.

9. Section 10 Report Preparation, second bullet, Page 10-1: The second bullet is hereby modified to read, "Data collection during the SI, including visual observations, and relevant. . . "

10. Appendix B, Sampling and Analysis Data Management Plan, Revision 2 Section 9, Page 9-1: The current version of the "USEPA national Functional Guidelines for Organic Data Review" is dated October, 1999. Both the 1994 and 1999 versions are referenced in the work plan and or quality assurance project plan. The 1994 reference is hereby deleted.

ENCLOSURE B

DISAPPROVAL COMMENTS
on Specific Portions of the May 15, 2002, Site Investigation Work Plan, J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

Note: Section 5.6, Air, is hereby disapproved. The following comments are provided to assist in the revision to this section.

1. Section 5.6, Air, Page 5-11: This section describes the stack emission testing performed at Baxter's Eugene facility. This testing was done in 1989 and was limited to the retorts. Figure 6-2 shows a variety of potential emissions sources in addition to the retorts. Because fugitive emissions from other sources cannot be quantified and thus cannot be accounted for in the air modeling activity, the air modeling activity cannot predict emissions for the whole site. Furthermore, if the stack testing from Eugene were to be used to estimate emissions at Arlington, then additional documentation of the processes at both facilities would be needed to support the modeling effort.

2. Section 5.6, Air, Page 5-12: The emissions given for the retort are the "Final Vacuum cycle". It seems that providing data for the retorts when the doors are opened would be much more relevant to actual emissions. The information in Table 2-1 must be considered when making the arguement that there are limited emissions. EPA is not convinced based on what is presented in the work plan are minimal.

3. Table 5-6: Although the one worker with detected pentachlorophenol (PCP) was less than the OSHA limits, the concentration detected exceeds the risk-based preliminary remediation goal (PRG) in ambient air for residents by a factor of about 285. This implies that if residents were exposed continually tot he level of PCP in air, that their risk may be as high as 3 x 10-4. Although air concentrations decrease dramatically with distance from the source, detections at this level indicate that additional analysis (and perhaps air monitoring) is warranted. The detection limits for other workers (i.e., 0.003mg/m3) are above the PRG for ambient air (i.e., 0.056 µg/m3).

Note: A revision to Section 6.4.3 is necessary. In addition to what is already presented, this section must be revised to include the following potential pathways:

4. Section 6.4.3, first bullet: Because on-site receptors are within the scope of a risk assessment, then direct exposure to current and potential future on-site receptors must be evaluated.

5. Section 6.4.3, second bullet: In addition to vapors, particulate from windblown dust also could be deposited onto the ground.

6. Section 6.4.3, third bullet: OSHA workplace limits are not based on potential human health risk. Therefore assessment of the inhalation exposure pathway is warranted using current toxicological data for COPCs.

Note: A revision to Section 8.4 is necessary. The revision must consider and incorporate, if appropriate, the following comments.

7. Section 8.4: The stack testing done at the Eugene facility was focused on the retort and does not account for the variety of fugitive emission sources on the Arlington facility. Therefore, air modeling may not represent the actual total air releases from the Arlington facility.

8. Section 8.4.2: Although chemicals detected in surface soil or surface water indicate some of the chemicals that may be released to air, it is possible that the volatile fraction would not be detected in other media. Therefore, restricting the list to previously detected chemicals is not appropriate. Additional chemicals include: naphthalene, benzene, and trimethylbenzenes.

9. Section 8.4.3: To estimate emissions from PCP solution mix tank and tanks 7 and 8, TANKS 4.0 would be an appropriate method. TANKS 4.0 is used to estimate VOC emissions from organic liquids stored in storage tanks.

10. Estimating emissions of PCP vapors from the vacuum pumps on the retorts will be based on previous stack tests performed on a similar Baxter's facility in Eugene, Oregon. It has been acceptable to use emission factors developed as a result of a source test at one facility in estimating emissions at a similar facility under the condition that both processes are identical with similar design, through puts, and production rates. Therefore, EPA would need to review the most recent stack test performed at the Eugene facility to review the stack test protocol, parameters, and results, along with copies of both Arlington and Eugene's most recent descriptions and process flow diagrams (PFD) for comparison and verification purposes. To ensure that the appropriate data is used for modeling, reviewing bother processes needs to be done prior to performing the modeling.

    Even though the PCP, PCDD/PCDF have low vapor pressure and are unlikely to volatilize, fugitive emissions estimation from unpaved roads will help in assessing the potential off-site risk. If the facility is required to keep the roads wet at all times by using a sprinkler system or chemical suppressant then dust emissions would be significantly low.

    Additional detail must be provided on how inhalation of fugitive dust will be assessed.

11. EPA's meteorologists reviewed the proposed data set and concluded that because the hourly meteorological data may not be representative of site conditions, a screening

approach (i.e. using SCREEN3) may be more appropriate. SCREEN3 can handle a variety of sources and my provide emissions data for use in the risk modeling.

Receptors on-site must be evaluated for current and potential future use scenarios.

12. Section 8.4.4.2: The cited sources of meteorological data may not be appropriate for this facility. A screening model, as described above, may be more appropriate given the current data limitations.

13. Section 8.4.5: In addition to PCP and dioxins/furans, samples off-site must be analyzed for PAHs.

ENCLOSURE C

CONDITIONS OF APPROVAL
for the May 15, 2002, Site Investigation Work Plan, J.H. Baxter & Co., Arlington, Washington Facility, Revision 2

1. The activities conducted by implementing this approved work plan and modifications represent the first phase of the field work. Additional phases of work may be necessary to fully characterize the contamination at this site. EPA notes that the work plan mentions a phased approach in various places and is hereby approving the work plan on the condition that additional phases of data collection must be implemented if determined to be necessary by EPA or Baxter.

2. Several comments previously made by EPA have, by mutual consent, not been directly incorporated into the revised work plan. The approval of this work plan is contingent upon Baxter addressing the comments in the Site Investigation Report versus the work plan as agreed to by EPA.

3. Section 5.1, Surface Soils, Page 5-2: The text indicates that existing soil data consists of twenty-three (23) samples; however, as broken down, only twenty-two (22) are accounted for (i.e., four (4) obtained in 1992 by Ecology, twelve (12) from a 1999 Baxter Study, and six (6) from borings in the 2.5 to 4-foot depth interval). Please provide an explanation to this discrepancy. In addition, as stated previously by EPA, if these data are to be used for a risk assessment, then a more shallow depth interval should be used. Typically, for human health risk assessment, soils from the top six (6) inches to one (1) foot are considered to be surface soils. Therefore, additional sampling may be necessary to conduct an adequate risk assessment.

4. Page 5-2 and throughout the Work Plan: The use of units for concentrations which are used in a comparison, must report the concentrations in the same units. In most cases the concentrations will be in microgram per liter (µg/L) or microgram per kilogram (µg/Kg).

5. Section 5.4, Pore Water, Page 5-8: Provide a definition of the term, "pore water" and a reference from the literature. It is not clear if the term, as being used here, is limited to the lysimeters or in a more broadly used concept in site characterization.

6. Section 6: Provide a risk assessment-specific conceptual site model (CSM) that depicts potential migration pathways, exposure routes, potentially exposed receptors, and exposure pathways. Typically on the right hand side of this model, a list of receptors is provided with all the possible exposures they may experience (e.g., ingestion of soil, inhalation of dust). This type of CSM is used to ensure that data needed to support a risk assessment is obtained. An example is attached to this enclosure

7. *Section 8.1.1.1: Dioxins/furans must be analyzed (TALK TO RENE-DOES THIS COMMENT CONFLICT WHAT YOU AND I SAID TO THEM IN THE TECH MEETING) in a subset of samples across the site. Dioxins/furans are trace contaminants of PCP and although concentrations detected may be low, these compounds often contribute greatly to site risks because of their relatively high toxic potency. Additional samples to be analyzed for these compounds must be collected in the NAPL area, the retort area, and the old butt tank area.*

8. *Section 8.1.1.2: For the reasons described in the previous comment, dioxins/furans must be analyzed in surface soil in the main treatment area.*

9. *Section 8.2.1: For reasons described in comment 10 above, dioxins/furans must be analyzed in surface soil in the treated pole storage area.*

10. *Section 8.3.1: For reasons described in comment 10 above, dioxins/furans must be analyzed in surface soil in the treated pole storage area.*

11. *Table 8-1: Additional dioxin/furan analysis would be useful to understand the frequency and distribution of these contaminants across the site. Also, additional data may result in the determination of a 95% UCL on the mean as an exposure point concentration rather than use of the maximum detected concentrations in the risk assessment.*

    Because VOCs may be present in air, process water samples to support the air modeling must be analyzed for VOCs.

12. Section 8.3.1.2, Task 3.1.2, Surface Soils, Page 8-18: In general, modifications to this section do reflect meeting discussions. However, the surface soil sampling description remains confusing. Baxter must ensure that the field samplers clearly understand what is to be done and carefully document what is done in the field.

13. Figure 4-5: The data used in this figure ends with the year 2000. Baxter must ensure that future submittals include all data collected to present.

14. Table 9-1, MTCA Method A levels for TPH-Diesel must be added to this table. For groundwater, the level is 500 µg/L and for soil the level is 2,000 mg/kg. These are non-specific default clean up levels. Using site-specific data, site specific values (based on various petroleum fractions present) can be determined.

15. Section 9: Any organic analyte detected must be retained for consideration in the risk assessment. A comparison to background levels can be evaluated as part of the evaluation of remedial alternatives.